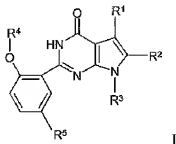


Claims:

1. (currently amended) A compound of the formula I :



wherein R¹ is C₁-C₄ branched or straight chain alkyl;‡

R² is H;

R³ is H; C₁-C₆ branched or straight chain alkyl; C₂-C₄ alkenyl; or C₂-C₄ alkynyl;

R⁴ is H; C₁-C₆ branched or straight chain alkyl; or C₂-C₄ alkenyl;

R⁵ is SO₂NR¹⁰R¹¹;‡

R⁸ is H; or C₁-C₆ branched or straight chain alkyl;

R¹⁰ and R¹¹ are each independently H; ~~or~~ C₁-C₁₂ branched or straight chain alkyl; C₁-C₃ halogenated branched or straight chain alkyl; C₂-C₆ alkenyl; C₂-C₆ alkynyl or C₃-C₆ cycloalkyl; or R¹⁰ and R¹¹ together with their attached nitrogen atom form a pyrrolinyl, pyrrolinone group, piperidinyl, morpholinyl, or 4-N(R⁸)-piperazinyl; which are optionally substituted with C₁-C₄ branched or straight chain alkyl, NR¹⁴R¹⁵-phenyl, the said groups optionally substituted with OH,‡ CN, CO₂R⁸, C₁-C₄ branched or straight chain alkyl, or C₁-C₃ alkoxyl or linked together with another substituted phenyl by a carbonyl group;

R¹⁴ and R¹⁵ are each independently H; C₁-C₄ branched or straight chain alkyl;

or their pharmaceutically acceptable salts.

2-3. (Cancelled)

4. (Previously amended) The compound according to claim 1, wherein the compound is selected from a group consisting of:

2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-methoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, and the hydrochloride thereof;

2-[2-n-propoxy-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, and the hydrochloride thereof;

2-[2-allyloxy-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, and the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-n-propoxy-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-ethyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-methylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-methylpiperazinyl-1-sulfonyl)phenyl]-5-ethyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-ethoxycarbonylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[4-(2-hydroxyethyl)piperazinyl-1-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(pyrrolidinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[3-(2-oxy-pyrrolidin-1-yl)-n-propylamino-N-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[2-(pyrrolidin-1-yl)-ethylamino-N-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(morpholino-4-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-[3-(morpholin-4-yl)-n-propylamino-N-sulfonyl]phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[2-(morpholin-4-yl)-ethylamino-N-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(2,6-dimethylmorpholino-N-sulfonyl)phenyl]-5-

methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(1-benzylpiperidyl-4-aminosulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[2-(piperidin-1-yl)ethylamino-1-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-benzylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo [2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-phenylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo [2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(piperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-benzo[1,3]dioxol-5-yl-methylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d] pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[4-(3-phenyl-n-propan-1-yl)piperidyl-1-sulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(n-propylamino-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and

other possible hydrochloride thereof;

2-{2-ethoxyl-5-[N,N-di(2-hydroxyethyl)aminosulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[N-(2-hydroxyethyl)-N-methylaminosulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[N-(2-hydroxyethyl)-N-ethylaminosulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-{2-ethoxyl-5-[N-(2-hydroxyethyl)-N-n-butylaminosulfonyl]phenyl}-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(p-ethoxylcarboxylphenylamino-N-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(o-benzoylphenylamino-N-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(N2-acethydrazido-N1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride and dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(2-dimethylaminoethylamino-N-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-ethyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-morpholinomethyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof;

2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-(pyrimidinyl-2)-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof; and

2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-allyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the monohydrochloride, dihydrochloride and other possible hydrochloride thereof.

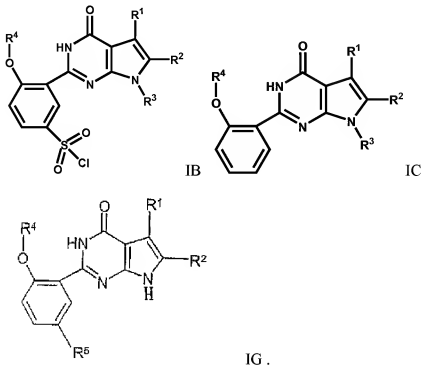
5. (canceled)

6. (previously amended) A pharmaceutical composition containing the compound according to claims 1 or 4 as an active ingredient and a pharmaceutically acceptable excipient.

7. (previously amended) A veterinary drug composition containing the compound according to claims 1 or 4 as an active ingredient and a veterinarily acceptable excipient.

8-9. (canceled)

10. (currently amended) Intermediates for the manufacture of compound of formula I according to claim 1 **having the Formulae IB, IC and IG:**



wherein R¹ is C₁-C₄ branched or straight chain alkyl;

R² is H;

R³ is H; C₁-C₆ branched or straight chain alkyl; C₂-C₄ alkenyl; or C₂-C₄ alkynyl;

R⁴ is H; C₁-C₆ branched or straight chain alkyl; or C₂-C₄ alkenyl;

R⁵ is SO₂NR¹⁰R¹¹;

R⁸ is H; or C₁-C₆ branched or straight chain alkyl;

R¹⁰ and R¹¹ are each independently H; C₁-C₁₂ branched or straight chain alkyl; C₁-C₃ halogenated branched or straight chain alkyl; C₂-C₆ alkenyl; C₂-C₆ alkynyl or C₃-C₆ cycloalkyl; or R¹⁰ and R¹¹ together with their attached nitrogen atom form a pyrrolinyl, pyrrolinone group, piperidyl, morpholinyl, or 4-N(R⁸)-piperazinyl; the said groups

optionally substituted with OH, CN, CO₂R⁸, C₁-C₄ branched or straight chain alkyl, or C₁-C₃ alkoxy.

11. (New) The compound according to claim 1, wherein R¹ is C₁-C₄ branched or straight chain alkyl; R² is H; R³ is C₁-C₆ branched or straight chain alkyl; R⁴ is C₁-C₆ branched or straight chain alkyl; R⁵ is SO₂NR¹⁰R¹¹; R⁸ is H; C₁-C₆ branched or straight chain alkyl; and R¹⁰ and R¹¹ are each independently H; C₁-C₁₂ branched or straight chain alkyl; C₁-C₃ halogenated branched or straight chain alkyl; C₂-C₆ alkenyl; C₂-C₆ alkynyl or C₃-C₆ cycloalkyl; or R¹⁰ and R¹¹ taken together to form a pyrrolinyl, pyrrolinone group, piperidyl, morpholinyl, 4-N(R⁸)-piperazinyl; the said groups optionally substituted with C₁-C₄ branched or straight chain alkyl; or their pharmaceutically acceptable salts.

12. (New) The compound according to claim 11 which is 2-[2-ethoxyl-5-(4-ethylpiperazinyl-1-sulfonyl)phenyl]-5-methyl-7-n-propyl-3,7-dihydropyrrolo[2,3-d]pyrimidin-4-one, the mono-hydrochloride, dihydrochloride and other possible hydrochloride thereof.